MASTER OF SCIENCE
IN
INFORMATION TECHNOLOGY MANAGEMENT

RE-ENGINEERING THE UNITED STATES MARINE CORPS'
ENLISTED ASSIGNMENT MODEL (EAM)
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In a time of downsizing and budgetary constraints the Manpower division of Headquarters, the United States Marine Corps, accomplishes its mission "to put the right Marine in the right place at the right time with the right skills and quality of life" in a variety of ways. Currently, one of the processes that assist the Marine Enlisted Assignments branch is the Enlisted Assignment Model. The current system is not producing the results that are needed and the current managers do not trust the output. This thesis proposes changes to the EAM user interface, data access, and data storage capabilities to enable the Marine Corps to use the latest information technology to more closely mirror the vision as stated above. With the use of Business Process Re-engineering, Process Modeling, and Database Design a prototype is developed to address areas of the current system that can be changed. By using these methods to ensure an appropriate interface with optimization techniques, a complete Decision Support System for manpower assignments can be realized. These changes will empower managers to effectively and efficiently manage, not just monitor manpower readiness in order to meet the challenges of the 21st century.

DoD KEY TECHNOLOGY AREAS: Manpower, Personnel Management and Assignment, Database Management Systems

KEYWORDS: U.S.M.C., Databases, Manpower Assignment, Models, Decision Support Systems, Graphical User Interface

SOCIOTECHNICAL SYSTEMS AS APPLIED TO KNOWLEDGE WORK
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This study examines the logic behind choosing variances and the design of forums during the planning of deliberations in non-routine work environments using a Sociotechnical System design approach. This study was accomplished through review and comparison of literature on sociotechnical applications of non-routine, knowledge work environments. The traditional sociotechnical application applied to factory settings with linear and routine work tasks analyzes unit operations within an open system, identifying technical variances that contribute to problems and social roles that control the variances. A new sociotechnical approach has been developed for systems involved in non-routine, knowledge work environments. This approach focuses on deliberations formed around topics, establishes variances that lead to poor deliberations, design forums that minimize variances and gives control of variances to discretionary coalitions. These results generally support that variances contributing to poor deliberations are well established and that organizations need only identify the key variances that contribute to problems in their system. Organizations need to understand how the key variances effect the

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development of knowledge and how forums can be designed to enhance deliberations. This study places specific focus on the design of information technology forums that enhance knowledge development.

DoD KEY TECHNOLOGY AREAS: Command, Control, and Communications, Computing and Software, Human Systems Interface

KEYWORDS: Sociotechnical Systems, Non-Routine Work, Knowledge Work, Deliberations

A NAVAL RESERVE DATABASE APPLICATION
AND FUTURE NETWORK SOLUTIONS

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This thesis develops a Naval Reserve squadron database management system prototype and provides recommendations on future network solutions. The development centers on a Strike Fighter Squadron 203 (VFA-203), located in Atlanta, Georgia.

This project focuses on an application, which will support those current critical administrative systems that are not electronically automated or do not reside in a distributed computing environment. Emphasis is on utilizing current hardware and software while minimizing costs, training and organizational change associated with new information systems. Database scalability using Access 97 and IT 21 compliance are important features of this system.

A small local area network (LAN) option in a Peer-to-Peer configuration is discussed as a means to increase system efficiency by providing distributed access to this application. Future client/server network architecture capable of far greater scalability, network sharing and security will be recommended for further increases in system effectiveness.

DoD KEY TECHNOLOY AREA: Computing and Software

KEYWORDS: Database Management System, DBMS, Access 97 Software, Local Area Network, LAN